# NORTH DAKOTA

# NPS POLLUTION MANAGEMENT PROGRAM

# FISCAL YEAR 2006 ANNUAL REPORT

**November 1, 2005 - October 31, 2006**

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# I. Introduction

The North Dakota Nonpoint Source Pollution Management Program is a voluntary program focused on the reduction and/or prevention of NPS pollution impairing beneficial uses of the state's water resources. Locally sponsored projects and/or initiatives continue to be the primary means by which the NPS Program is implemented across the state. Over the long term, the cumulative benefits realized in the local project areas will assist the ND Department of Health (NDDH) to achieve the long term goals of the NPS Pollution Management Program Plan (Management Plan). The Management Plan mission statement and long term goal are as follows:

> North Dakota NPS Program Mission: "To protect or restore the chemical, physical, and biological integrity of the waters of the state by promoting locally sponsored, incentive based, voluntary programs where those waters are threatened or impaired due to nonpoint sources of pollution."
>
> North Dakota NPS Management Program Long-term Goal: "To initiate a balanced program focused on the restoration and maintenance of the beneficial uses of the State's water resources (i.e. streams, rivers, lakes, reservoirs, wetlands, aquifers) impaired by NPS pollution."

Progress toward the long term goal will be based on the number of watershed restoration projects initiated by 2013. By the 2013 target date, the NPS Program objective is to have 75 watershed restoration projects initiated within the 114 watersheds with water quality limited waterbodies (as identified in the 1998 305(b)). To achieve the long term goal and objective, an average of five watershed restoration projects must be initiated annually. For the short term and annual reporting purposes, program progress will be measured, in part, by the number of local watershed restoration projects implemented each year. Computer models, such as STEPL and the Animal Feedlot Runoff Risk Index (AFRRI) worksheet, will also be used to estimate annual load reductions associated with best management practices (BMP) supported by the NPS Program. Other short term measures will include the number of NPS assessment or TMDL development projects initiated as well as the types and amount of public out-reach efforts supported by the program.

Since January 2003, the NPS Program has supported 69 different projects with funding provided through the 2003 Consolidated Section 319 Grant (2003 Grant) and 2006 Section 319 Grant (2006 Grant). The budgets, status and project periods for all the projects are provided in Appendix A. Approximately 5% of the funding under the grants has been appropriated for NPS Program staffing and support. The balance of the Section 319 funds, (i.e., 95%), have been allocated to locally sponsored projects focused on NPS pollution control, education or assessment.

The local projects supported with Section 319 funding can be placed under one of four different categories. These project categories are: 1) development phase projects; 2) educational projects;

3) technical support projects; and 4) watershed projects. Under each of these categories, there may also be one or more different project types or subcategories.

The primary purposes of development phase projects are to identify beneficial use impairments or threats within specific waterbodies and determine the extent to which those threats or impairments are due to NPS pollution. Typically, development phase projects involve an inventory of existing data and supplemental monitoring to allow accurate assessment of the targeted waterbody and its watershed. Through these efforts, the local project sponsors are able to: 1) determine the extent to which beneficial uses are being impaired by NPS pollution; 2) identify specific sources and causes of the pollutants; 3) establish preliminary pollutant reduction goals or TMDL's; and 4) identify management measures needed to restore or maintain the beneficial uses of the waterbody. Types of projects under this category include: 1) NPS Assessment Projects; 2) TMDL Development Projects; and 3) Multi-Year NPS Assessment Projects. To date, twenty-two development phase projects have been supported under the 2003 and 2006 Grants.

Educational projects are designed to increase public awareness and understanding of various NPS pollution issues and/or the solutions to specific NPS pollution concerns. The focus of these educational efforts may range from a local source or cause of NPS pollution to statewide measures that can be initiated to reduce NPS pollution. Educational tools typically used include brochures, all media (TV, radio, newspaper, etc.), workshops, "how to" manuals, tours, exhibits, and demonstrations. Two types of educational projects are currently being delivered in the state. One type is the demonstration projects. These projects focus on the development of on-the-ground demonstrations for educational purposes. The other type of educational project includes the public outreach projects, which are focused on the distribution of information on various local and/or state NPS pollution issues. Currently, there are nine educational projects being funded under the 2003 and 2006 Grants.

Projects designed to deliver technical or financial assistance to other ongoing NPS pollution management projects are identified as "Technical Support Projects." These projects are either statewide in scope or targeted toward an area that may include multiple NPS projects. The primary purpose of the nine support projects funded under the 2003 and 2006 Grants is to deliver a specific service or "tool" to the locally sponsored NPS projects. Specific types of assistance or management tools being delivered by the technical support projects include: engineering designs; manure management planning, digitized soils, landuse satellite imagery, and/or wetland restoration/creation support.

The watershed project category, which is the largest category, includes the most comprehensive projects currently implemented through the NPS Pollution Management Program. Over twenty-five watershed projects are currently supported under the two active Section 319 grants. These watershed projects are typically long-term efforts designed to address documented NPS pollution impacts and beneficial use impairments within priority watersheds. Common objectives for watershed projects include; 1) protection and/or restoration of impaired beneficial uses through voluntary implementation of best management practices; 2) dissemination of information on

local NPS pollution concerns and effective solutions to those concerns; and 3) evaluation of progress toward identified use attainment or NPS pollutant reduction goals. In nearly all cases, the goals and objectives for the watershed projects are identified through implementation of some type of development project (e.g., NPS Assessment Projects, TMDL Development, etc.).

To track progress toward individual project accomplishments each project sponsor is required to submit an annual report to the NDDH. These reports are used by the NDDH to document and evaluate progress toward project specific goals. Ultimately, the local projects will also submit a final project report summarizing accomplishments for the entire project period. To fulfill the 2006 annual reporting requirements, all the reports for the local projects have been received and entered in the Grants Reporting and Tracking System (GRTS).

Annual evaluation of the NPS Program is best gauged by the accomplishments and progress towards the goals and objectives identified under each section of the Management Plan. For the 2006 NPS Program annual report, the reporting sections and associated information has been organized to be consistent with the sections in the Management Plan. This section, Section I, identifies the NPS Program long term goal as well as provides a general description of the types of projects supported by the program. Sections II through VII discuss the accomplishments associated with each component of the Management Plan. Information presented in each section will include a discussion on the accomplishments related to the applicable goal and a brief status report for each objective. The six major sections of the Management Plan that are addressed in this report are as follows:

- Resource Assessment - This section addresses the NPS Program's existing inventory/assessment system and future needs to improve or expand assessment efforts.

- Prioritization - This section discusses existing and future prioritization methods or strategies within the NPS Program.

- Assistance - This section focuses on "how" the financial and technical assistance available through the Program is delivered to state/local project sponsors.

- Coordination - Development and maintenance of partnerships with private and local/state/federal agencies and organizations are described in this section.

- Information/Education - The Program's multi-year strategy for public outreach and information dissemination is described under this section.

- Evaluation/Monitoring - Program and local project evaluation/monitoring efforts are addressed in this section.

## II. Resource Assessment

**Resource Assessment Goal:** To accurately and thoroughly assess beneficial use support and the sources and causes of use impairments within the state's watersheds.

Resource assessment is accomplished at both the statewide and local level. On a statewide basis, data (e.g., water quality, biological, etc.) collected by state and local staff is utilized to evaluate and document water quality and beneficial use trends within the various waterbodies being monitored across the state. At the local level, resource managers use watershed-specific data to identify beneficial use and water quality impairments; establish waterbody priorities; develop watershed strategies; and/or measure benefits of applied BMP.

The 303(d) list (TMDL List) and 305(b) Reports developed with data collected statewide, are the primary documents used during initial watershed planning efforts. Information in these documents is used to help establish state and local priorities; determine general resource assessment or management needs; and identify areas needing additional evaluation. Future 305(b) Reports will also serve as the primary documents for the evaluation of NPS Program. The most current integrated reports and previous 305(b) reports are available on the NDDH web site
http://www.health.state.nd.us/wq/sw/Z2_TMDL/TMDL_Lists/B_TMDL_List.htm.

Locally sponsored NPS assessment or TMDL development projects are the primary means used to determine local watershed priorities and specific management measures. These local assessments, commonly referred to as "development projects," provide the foundation for all watershed projects by identifying specific sources and causes of NPS pollutants impairing or threatening beneficial uses. This information is used to establish local watershed priorities as well as to develop multi-year project implementation plans (PIP) that address the identified beneficial use impairments. When applicable, NDDH staff also coordinate with the local sponsors to utilize the assessment data to develop TMDLs.

There are two sources of Section 319 financial support for assessment level projects. Short term (i.e., 1-2 years) NPS assessment projects are supported with Section 319 funds available through the NPS Program's "Development Fund." Section 319 funding available under the Development Fund are unexpended funds reallocated from other NPS projects that were completed under budget. If the waterbody is also listed on the TMDL List, alternative funding sources (e.g., 604(b); 104(b)(3)) may also be used to support the assessment activities. For the multi-year or basin-wide NPS assessments, the local sponsors participate in the annual Section 319 grant application process to secure Section 319 support (Base or Incremental Funding) for their projects. Regardless of the source, the match to the Section 319 funding is provided by the local project sponsors.

To achieve the resource assessment goal, the Management Plan identifies four specific objectives. These objectives and a brief status update are as follows:

**Objective 1**. Complete periodic assessments of the eight digit hydrologic units (HU) in the state.

(Complete) - Assessment of the eight digit HU's was initially accomplished through the 1998 Unified Watershed Assessment Report. The completion of subsequent Unified Watershed Assessment Reports has been discontinued.

**Objective 2**. Develop and implement a strategy/process that will allow accurate assessment of the water quality and beneficial use conditions within the state's 12 digit hydrologic units (HU's).

(On Schedule) - The strategy being employed by the NPS Program is to coordinate with interested local partners to collect the data needed to assess the sources and causes of identified beneficial use impairments. The delivery of financial and technical assistance is primarily based on the degree of local interest and commitment rather than pre-determined subwatershed priorities established at the statewide level. If sufficient local interest is demonstrated, technical and financial assistance is provided to establish local subwatershed priorities, develop assessment schedules, and implement assessment activities. When establishing the local assessment priorities and strategies, particular emphasis is always placed on the waterbodies on the most current 303(d) list. When applicable, local subwatershed boundaries are also based on the 12 digit hydrologic units. This process was used to develop and implement all the development/assessment phase projects identified in Appendix A.

**Objective 3:** (Revised 10/03) Establish assessment goals for the local priority watersheds and/or the 12 digit HU's and develop quality assurance project plans (QAPP's) to assess beneficial use conditions and identify sources and causes of pollutants impairing the beneficial uses.

(On Schedule) - Fifteen local NPS assessment and/or TMDL development projects are currently supported under the 2003 Grant with Development Phase funds. Five additional NPS Assessment projects have also been awarded direct Section 319 allocations under the 2003 Grant. The status of the 15 Development Phase projects is provided in Table 1 and the status of the 5 NPS Assessment projects is provided in Appendix A. When applicable, the reports for the completed assessment projects have been entered in GRTS under project #5 of the 2004 Grant (008633032).

**Objective 4**: Assess/evaluate the success of local project efforts (e.g. BMP implementation) to improve water quality and restore and/or maintain the beneficial uses of waterbodies impacted by NPS pollution.

(On Schedule) - NDDH staff have developed QAPP's for all watershed projects supported under the NPS Program. Typically, these QAPP's are a continuation of the same monitoring plan/QAPP that was implemented during the assessment phase of the project.

In past years, most project evaluations have been focused on the documentation of trends in water quality within the project areas. Although this data is useful for measuring long term benefits, it is generally not sensitive enough to gauge changes over the short term. This limitation continues to be particularly evident (even after up to 10 years) in nearly all the larger watersheds. Consequently, the NDDH is also using computer models, such as the STEPL and the Animal Feedlot Runoff Risk Index (AFRRI) worksheet, to estimate load reductions associated with applied BMP. However, due to limited agricultural BMP options in STEPL, the load reductions generated by the model are only based on the acres of improved crop residue management and number of manure management systems installed. When appropriate, the AFRRI is used instead of the STEPL model to estimate nutrient load reductions associated with manure management systems. The AFRRI is more user friendly and appears to generate more realistic load reduction estimates. All estimated annual load reductions are entered in the GRTS, where applicable, in February of each year.

Objectives 2 and 3 most closely represent the type of efforts being supported by the NPS Program to assess the state's water resources. Technical assistance provided to the local sponsors under these objectives has included local priority setting; development of assessment strategies and QAPP's; interpretation of data; and development of NPS assessment reports. The NPS Program's "Development Phase Fund" under the 2003 Grant is the primary source of the Section 319 funding used to support the costs of the assessment/TMDL projects. To date, Development Phase funding has been provided to 15 different assessment and/or TMDL development projects. The specific projects are listed in Table 1.

**Table 1.** NPS Assessment and TMDL Development projects supported under the 2003 Consolidated Grant

| Project Name | 319 Allocation | Status * | End Date |
|---|---|---|---|
| Armourdale Dam TMDL Development | $4,055 | Complete | 4/30/04 |
| Bear/Bonehill Creek Assessment | $15,253 | Complete | 12/31/03 |
| Blacktail & McGregor TMDL Development | $14,998 | Complete | 9/30/04 |
| Carbury Dam TMDL Development | $6,184 | Complete | 5/31/03 |
| Cass Co. - Three Rivers Assessment | $99,430 | Active | 6/30/08 |
| Phase II - Dickinson Dike TMDL Development | $2,873 | Complete | 12/31/05 |
| Phase I - Dickinson Dike TMDL Development | $6,853 | Complete | 6/30/03 |
| Lake Hoskins Assessment Project | $18,066 | Complete | 9/30/04 |
| McDowell Dam Alum Treatment Demonstration | $54,678 | Active | 6/30/07 |
| McDowell Dam TMDL Development | $22,688 | Complete | 6/30/04 |
| Northgate Dam TMDL Development | $14,245 | Complete | 12/31/05 |
| Ransom Co. Sheyenne River Assessment | $79,480 | Complete | 3/31/05 |
| Red River Basin Volunteer Monitoring Pilot Program | $47,829 | Complete | 5/31/06 |

| | | | |
|---|---|---|---|
| Rice Lake Water Quality Improvement Project | $448,200 | Complete | 8/20/06 |
| Stutsman Co. Subwatershed Assessment Project | $11,845 | Active | 6/30/08 |
| Turtle River Watershed Assessment | $87,079 | Active | 6/30/08 |
| Upper Goose River Assessment Project | $71,616 | Active | 6/30/07 |
| Total | $1,005,372 | | |

***** Active or complete indicates the "status" of Section 319 financial support for the project.

In addition to the "development phase projects," there has been 5 other NPS assessment project supported through direct Section 319 allocations under the 2003 Grant. These five projects are grouped differently since they are generally longer projects and they were awarded a direct allocation under the grant. These additional assessment projects are listed under the "NPS Assessment - Multi Year Grant Award" category in Appendix A.

## III. Prioritization

**Prioritization Goal:** Based on the most current inventory and assessment data, prioritize the state's waterbodies/watersheds for future NPS pollution assessment or abatement efforts.

The NPS Program utilizes a "process" rather than a "physical list" (with the exception of the TMDL List) to identify local waterbody priorities. On a statewide basis, waterbodies included on the TMDL List are considered high priority waterbodies for the development and implementation of watershed assessments. At the local level, the TMDL listed waterbodies are also considered a high priority, although local resource managers may also establish priority rankings for other waterbodies not included on the TMDL List. For waterbodies lacking data and/or omitted from the TMDL List, a two step process is used to establish the priorities. The first step involves a review of current information (i.e., obtained through local feedback; the 1999 UWA; 305(b) Reports; NDDH; USGS; NRCS; etc.) to establish a preliminary ranking for each subwatershed in the project area. These rankings, which are either a Tier II or III ranking, are used to indicate the type of management or assessment activities needed in each subwatershed. The Tier II waterbodies are generally those that are on the TMDL List, while the Tier III waterbodies are those with very minimal to no data. The second phase focuses on the development of a local priority schedule for the implementation of the appropriate subwatershed assessment or management activities.

The Tier II and III waterbodies always require the collection of some type of additional data to accurately identify beneficial use impairments and/or determine the sources and causes of pollutants impairing beneficial uses. For these waterbodies, the local sponsors coordinate with NPS Program staff to determine data collection needs and establish a priority schedule for assessing the waterbodies. Following this prioritization process, financial and/or technical assistance is provided to the sponsors to develop and implement quality assurance project plans (according to the priority schedule) to collect the necessary data. This data is used to identify

NPS pollutant sources and causes, document beneficial use impairments; and determine management needs in the watersheds.

Tier I waterbodies have sufficient data identifying specific beneficial use impairments as well as the sources and causes of those impairments. Local sponsors typically recognize the Tier I waterbodies as their highest priority. In such cases, the local sponsors seek the appropriate financial assistance (i.e., Section 319 funding, EQIP funding, etc.) to implement a comprehensive watershed restoration plan. The Tier I waterbodies and watersheds currently being addressed with Section 319 funding are listed under the Watershed Projects in Appendix A.

The NPS Management Plan lists two specific objectives for accomplishing waterbody prioritization at the state and local level. These objectives and a brief summary of actions this past year are as follows:

**Objective 1:** At the basin and/or local level, categorize specific waterbodies into one of the three Tier rankings.

> (On Schedule) - As previously indicated, the TMDL List is the "waterbody priority" list being used by the NPS Program. The 2006 Integrated Report includes the current TMDL List. This report is on the ND Department of Heath's web site. The web address is http://www.health.state.nd.us/wq/sw/Z2_TMDL/TMDL_Lists/B_TMDL_List.htm. Local resource managers and project sponsors are also using the TMDL List and other information to establish assessment priority rankings and schedules. The assessment projects listed in Table 1 are local high priority Tier II or III watersheds, while the watershed projects included in Appendix A are previous assessment projects (Tier II or III) that are now recognized as Tier I waterbodies. All watershed projects listed in either table were initially identified through a local prioritization effort involving local resource managers and NPS Program staff.

**Objective 2:** Establish priority rankings for each of the Tier I, II, and III subwatersheds within local project areas and/or the six major river basins in the state.

> (Discontinued) - The scheduling and implementation of the appropriate actions is being accomplished with priority rankings limited to Tier I, II, or III. Prioritization within each Tier is not needed to further define local assessment or watershed implementation schedules. As a result, given the similarities between Objective 1 and 2 and limited need for rankings within each Tier, Objective 2 and its Tasks have been incorporated into Objective 1.

## IV. Assistance

**Assistance Goal:** Provide sufficient financial and technical assistance to local resource

managers (e.g. SCDs, WRBs) to ensure accurate identification of beneficial use and water quality impairments resulting from NPS pollution and effective development and completion of projects that will restore and/or maintain the beneficial uses of waterbodies impacted by NPS pollution.

The number of projects initiated and/or maintained on an annual basis is one of the main factors used to evaluate NPS Program success in delivering financial and technical assistance. Program assistance generally starts with the development of the project implementation plans and continues throughout the implementation period of the projects. Types of assistance being provided to local projects on an annual basis include: project oversight; sample analysis; PIP review and comment; sample collection and project management training; quality assurance project plan development; distribution of educational materials; biological monitoring support; and financial support. The following personnel are involved in NPS Program delivery:

- Water Quality Division Director & Surface Water Program Manager - Program Supervision (0.70 FTE)
- NPS Program Coordinator - Program Administration (1 FTE)
- Environmental Scientist - Monitoring/Assessment Assistance (2.5 FTE)
- Watershed Planning & Information/Education Coordinator - I/E Assistance (1 FTE)
- Microbiology and Chemistry Lab Personnel - Sample Analysis (4 FTE)
- Ground Water Program Personnel - Aquifer Assessment Project (2 FTE)
- Secretarial Assistance (0.5 FTE)

The specific roles of NDDH staff involved in the NPS Program are described in the most current NPS Program Staffing and Support Workplan dated July 1, 2005 - February 28, 2007. Under the 2003 Grant, approximately, 7% of the NPS Program's expenditures are used to support staff involved in program delivery. Table 2 summarizes the NPS Program staffing and support expenditures under the 2003 Grant as of June 30, 2006.

**Table 2.** Estimated NPS Program Staffing & Support Budget & Expenditures: January 1, 2003 - June 30, 2006

| Cost Category | Section 319 Funds | State Match | Total Expenditures |
|---|---|---|---|
| Personnel Salaries | $690,353.40 | $460,235.60 | $1,150,589.00 |
| Fringe Benefits | $226,274.40 | $150,849.60 | $377,124.00 |
| Travel | $50,620.80 | $33,747.20 | $84,368.00 |
| Equipment | $0.00 | $0.00 | $0.00 |
| Supplies | $60,003.60 | $40,002.40 | $100,006.00 |
| Other (phone, postage, rent, misc.) | $113,161.80 | $75,441.20 | $188,603.00 |
| Indirect | $83,479.20 | $55,652.80 | $139,132.00 |
| **TOTAL** | **$1,223,893.20** | **$815,928.80** | **$2,039,822.00** |

Since January 2003, NPS Program staff have assisted with the development and implementation of the 69 projects that have been or are being supported under the 2003 and 2006 Grants. Appendix A provides the approved budgets for all these projects. The 2006 annual reports for each of the projects have been submitted to the NPS Program and are provided in the GRTS under the 1999-2006 Grants.

Projects supported under the 2003 Grant can be grouped under one of eight different NPS project types or subcategories. These subcategories are an expansion of the project categories previously discussed in Section I. Inclusion of a project in a particular subcategory is based on the primary goals of the project. For example, projects included in the "Development Phase - NPS Assessment" subcategory are designed to document the sources and causes of NPS pollutants impairing beneficial uses, while projects included in the Watershed subcategory are designed to address those documented impairments through BMP implementation.

Grouping projects according to a "common goal" allows the opportunity to evaluate overall balance and emphasis of the NPS Program. Based on this, the NPS Program is targeting a majority of its resources to initiatives designed to assess NPS pollution impacts and/or implement the appropriate corrective measures. This focus is consistent with the NPS Program's watershed restoration goals. Table 3 lists the cumulative expenditures and distribution of costs between the different types of NPS projects under the 2003 and 2006 Grants.

**Table 3.** Section 319 Allocations and Expenditures per Project Type or Subcategory: January 1, 2003 - September 30, 2006.

| Project Type | Cumulative 319 Allocation | Cumulative 319 Expenditures | Percent of Total 319 Expenditures |
|---|---|---|---|
| Development Phase - NPS Assessment | $1,220,385.00 | $864,624.29 | 5.15% |
| Development Phase - TMDL Development | $71,896.00 | $71,894.19 | 0.43% |
| Education - Demonstration | $1,344,946.00 | $846,044.22 | 5.04% |
| Education - Public Outreach | $2,639,111.00 | $1,702,665.88 | 10.14% |
| Local Project Support (TA or FA) | $8,027,790.00 | $3,295,495.94 | 19.62% |
| NPS Assessment - Multi Year Grant Award | $165,150.00 | $165,147.55 | 0.98% |
| NPS Program Staffing And Support | $1,647,000.00 | $1,223,893.00 | 7.29% |
| Watershed Project | $19,236,442.00 | $8,626,655.10 | 51.36% |
| **Totals:** | **$34,352,720.00** | **$16,796,420.17** | |

NPS Program staff have also assisted with the development of PIP's for 7 new or continuation projects requesting FY 2007 Section 319 funding. The draft PIP's were reviewed by the NPS Task Force in August 2006. The updated and final PIP's for the project's are scheduled to be reviewed by the Task Force in December 2006. All final PIP's approved by the Task Force will be forwarded to EPA for final funding consideration and approval in January 2007.

NPS Program financial and technical assistance has continued to be directed toward a variety of local initiatives and/or projects that are designed to help accomplish the "Assistance Objectives" identified in the Management Plan. The Assistance objectives and a brief summary of related activities this past year are as follows:

**Objective 1:** Increase the ability of potential sponsors to determine their local NPS pollution management needs and develop strategies or plans that will effectively address those NPS pollution concerns.

> (On Schedule) - Local meetings have continued to be the primary means used to communicate to local resource managers and assist with their watershed planning needs. NDDH staff have been involved in numerous such meetings the past year. A majority of these local meetings have been with soil conservation districts and/or water resource boards. Informational materials have also been distributed to local sponsors and other resource managers throughout the year.

**Objective 2:** Provide financial and technical assistance to local project advisory committees to develop and implement NPS assessment or TMDL development projects to document local or basin-wide subwatershed priorities and establish specific subwatershed Tier rankings.

> (On Schedule) - Table 1 lists all the NPS Assessment and TMDL development projects supported under the 2003 and 2006 Grants. When available, the final reports for the completed assessment projects have been entered in the GRTS under the NPS Development and Assessment Projects (i.e., Project #5) of the 2004 grant (008633032).

**Objective 3:** Provide financial and technical assistance to local sponsors for the development and implementation of watershed projects addressing the highest priority waterbodies.

> (On Schedule) - As indicated in Appendix A, there are 26 watershed projects currently supported under the 2003 and 2006 Grants. Four additional watershed projects are also being considered for FY07 Section 319 funding. Final approval of the new watershed projects is expected to be issued by EPA in March/April 2007.

**Objective 4:** Expand sources of financial assistance for NPS pollution projects to reduce local sponsors' match responsibilities and/or the level of Section 319 assistance needed.

> (On Schedule) - Locally generated cash and/or inkind match continues to be the primary means by which Section 319 match responsibilities are being met by most local projects. This local support is typically provided by sponsors such as soil conservation districts or water resource boards as well as the participating producers. The non-federal match for the Section 319 funds committed to NPS Program staffing and support is provided through the state general fund.

This past biennium, some locally sponsored projects have also received non-federal match support through the State Water Commission Trust Fund (SWC Funds). Through the SWC Fund, a total of $200,000 was distributed between four local Section 319 projects. These SWC funds were specifically allocated to support the non-federal match needs associated with Section 319 cost share assistance used to support the development of manure management system designs. These funds were only allocated for the 06/07 biennium. To maintain continued SWC Trust Fund support, the NDDH has included a $200,000 "SWC Funding" line item in the agency's 08/09 biennium budget. If approved by the legislature, the SWC Funds will be passed through to local projects involved in the design and implementation of manure management systems.

Over the past two years, the NPS Program has also developed and implemented a low interest SRF loan program for manure management systems. Loans issued through the program are used to finance the producer match requirements associated with Section 319 and/or EQIP cost share assistance for manure management systems. The initial SRF loan budget was approximately $1.4 million. To date, nearly $800,000 in loans have been issued to partially support the installation of 9 manure management systems. Tentative plans are to increase the SRF loan budget by another $1,000,000 in 2007.

**Objective 5:** Maintain post-project NPS pollution management efforts and document long-term benefits of NPS pollution control and/or water quality improvement practices applied within the project areas.

(Discontinued) - Due to time constraints and staff changes this past year, NPS Program monitoring efforts have been limited to the evaluation of active NPS projects. As a result, Objective 5 and its tasks have remained under a "discontinued" status. Initiation of this objective will be reevaluated during the 2007 sampling season.

## V. Coordination

**Coordination Goal:** Increase the effectiveness of NPS pollution management in the state by coordinating project development and implementation efforts with local, state, and federal agencies and private organizations involved with natural resource management in the state.

Initiation and maintenance of a coordinated effort with the appropriate entities is one of the most important activities within the local project areas. At the onset of the projects, the lead sponsors are encouraged to solicit the involvement of all groups or agencies that may have an interest in the planned project. For most projects, the involvement of multiple entities has helped ensure the appropriate expertise is available and in some cases, helped the projects gain additional financial support.

Given the agricultural focus of most projects, local Soil Conservation Districts (SCD) are the lead sponsor for a majority (56%) of the current NPS projects. The SCD's provide the local leadership that is necessary to implement and manage projects as well as the "familiar face" to

ensure effective communication with agricultural producers. However, as the diversity of the NPS Program has expanded, an increasing number of projects are being sponsored by other local or regional organizations such as universities; state agencies, lake associations, resource conservation and development councils, and water resource boards.

Most lead sponsors establish some type of Project Advisory Committee (PAC). These PAC's assist with project development and management as well as provide additional expertise to help ensure the projects stay focused on identified NPS pollution concerns. Typical groups or organizations represented on these advisory committees include; NRCS, City Councils, County Commissions, Extension Service, Wildlife Groups, and Water Resource Boards.

The NPS Task Force has also helped strengthen coordination between NPS projects and similar programs sponsored by other state or federal agencies and organizations. Through the annual project review process, the Task Force is involved in the development of all NPS projects initiated in the state. During this process, the Task Force members become aware of the goals and objectives of all the local NPS projects, which in turn, enables them to recognize and act on partnership opportunities for projects/programs managed by their agency or organization. The review process has also helped local sponsors gain a better understanding of what the Task Force member agencies can offer to local NPS pollution management projects.

NPS Program efforts to establish and expand coordination at the state and local level is essentially accomplished through two main objectives. These objectives and a brief summary of activities the past year are as follows:

**Objective 1:** Expand local participation in the prioritization, development, and implementation of NPS pollution management projects

> (On Schedule) - The primary task under this objective focuses on the development and maintenance of project advisory committees. Currently, most if not all, the NPS projects have established an advisory committee to provide input on project management and delivery. Although most committees include several different groups and organizations, the most common participants have been the local SCD and WRB as well as NRCS field office staff. Other groups that are typically invited to participate on the local advisory committees include County Commissions, NDDH, Extension Service, and City Councils. Over the past several years, the formation of the "TMDL Satellite Offices," has allowed the NDDH/NPS Program to become a more frequent participant in most of the local project advisory committees.
>
> Initially the formation of Basin Management Committees was scheduled under this section of the Management Plan. At this time, it is not feasible to form basin level committees until more local advisory committees are formed in each river basin. As additional advisory committees are established, NPS Program staff will assist any interested advisory committees with the formation of a Basin Management Committee.

**Objective 2:**. Maintain partnerships and communication with the appropriate local, state, and federal agencies, and private organizations to coordinate resources and ensure other natural resource management efforts are consistent with the state's NPS pollution management goals.

> (On Schedule) - State level coordination and information dissemination has continued to be accomplished through the NPS Task Force meetings and newsletter as well as through participation on other review committees such as the NRCS State Technical Committee.

## VI. Information and Education

**Information and Education Goal:** Increase North Dakota residents' understanding of the water quality and beneficial use impairments associated with NPS pollution and strengthen public support for the voluntary implementation of NPS pollution control activities.

A variety of educational efforts are supported annually to increase public understanding of NPS pollution as well as to strengthen support for current and future NPS pollution management projects. These educational efforts include activities such as newsletters, workshops, demonstrations, tours, fact sheets, radio ads, and videos. Generally, the information/education (I/E) efforts are sponsored and implemented by local entities such as soil conservation districts, water resource boards, and NDSU Extension Service. Although the goals and target audience of the different educational projects may vary, cumulatively these state/locally sponsored I/E projects form a balanced statewide NPS pollution education program.

Under the 2003 and 2006 Grants, approximately 15% of total Section 319 expenditures have been associated with the implementation of I/E projects. Through this support, multiple educational events have been conducted, including events such as K-12 lyceums; BMP demonstrations, workshops for livestock producers, and water quality training for teachers. Appendix A lists the I/E projects supported under the 2003 and 2006 Grants. The descriptions and 2006 annual reports for each I/E project are provided in the GRTS.

Many of the other projects listed in Appendix A also have an educational component or simply provide the "tools" to support the local educational efforts. Although the watershed, assessment or technical support projects have not been specifically designed to focus on public out-reach, they do expend a significant amount of time and resources on public education through the development of various educational materials or tools. These supporting activities ultimately help enhance and strengthen the NPS Program's statewide public education efforts. Descriptions of the I/E activities initiated by each of the NPS projects are provided in the 2006 annual reports. These annual reports are provided in the GRTS.

When possible, NPS Program staff have been involved in many of the local educational events. These efforts have included presentations at local tours and workshops, display booths at county fairs and agricultural shows; instruction at ECO ED camps, assistance with Envirothon competitions, newsletter articles; and dissemination of various materials. However, involvement in the local educational efforts was reduced somewhat the past year due the loss of the NPS

Program I/E coordinator. Additional staff were hired toward the end of this reporting period and the assignment of educational duties to the new staff will be evaluated in 2007.

Delivery of the NPS I/E Program involves five main objectives. These objectives and a summary of associated activities this past year are as follows:

**Objective 1:** Assess the general public's knowledge of NPS pollution issues.

(Behind Schedule) - Informal surveys were taken at the NPS informational booth in the spring of 2005. To follow-up on this, the feasibility of conducting a more structured statewide survey to reassess general public NPS pollution knowledge/awareness will be evaluated in 2007. If feasible, this survey will be coordinated with the long-term educational projects (ECO ED, WET, and TREES) to assist them in gauging the benefits/needs of their youth based programs.

**Objective 2:** Deliver a balanced statewide I/E Program that addresses NPS pollution issues in the state and is targeted toward all age groups.

(On Schedule) - The I/E program has a well developed youth education component that addresses K-12 students. The main long term youth education projects include the ECO ED Camp, Envirothon Program, The Regional Environmental Education Series (TREES) and Project WET. The 2006 annual reports for each of these projects are available in the GRTS.

On the statewide level, producer education is also being accomplished through the local watershed projects and statewide projects such as the NDSU Extension Service Livestock Nutrient Management Program. Within the watershed projects, the sponsors utilize news articles, one-on-one contacts, workshops, and tours to keep agricultural producers and the general public informed on the various NPS pollution issues in their areas. The statewide projects supported by the NPS Program "fill in the gaps" by offering educational opportunities focused on management and prevention of NPS pollution. This past year, this has included the release of several manure management bulletins, a series of nutrient/manure management workshops, composting demonstrations, and many manure management based presentations at other educational conferences and workshops. The various educational efforts of the NPS projects are summarized in the 2006 annual project reports in the GRTS.

**Objective 3:** Based on public input and reviews of existing I/E efforts, expand or develop new NPS pollution/water quality I/E activities and materials to ensure the appropriate and sufficient information is available to the residents of the state.

(On Schedule) - The various educational materials and events developed and distributed by the local and statewide educational projects under the 2003 and 2006 Grants are described in the 2006 annual reports in the GRTS.

**Objective 4:** Deliver a consistent and balanced I/E Program across the state by coordinating with with various federal, state, local, and private organizations and/or agencies to develop and implement I/E projects focused on priority NPS pollution management issues in the state.

> (On Schedule) - Coordination with NRCS, Extension Service, Soil Conservation Districts and other agencies to achieve this objective is an ongoing effort accomplished through direct mailings, meetings, participation in events, etc.

**Objective 5:** Evaluate public awareness of NPS pollution issues in the state to determine the effectiveness of the I/E Program and identify additional activities needed to strengthen the program.

> (Behind Schedule) - As previously indicated, NPS Program staff are planning to coordinate with the long-term youth education projects (e.g., WET, TREES, etc.) and possibly NDSU Extension Service to evaluate the feasibility of conducting a statewide survey to gauge public knowledge/awareness of NPS pollution issues in the state. If feasible, this survey will be conducted statewide and data collected will be used to determine future NPS pollution education needs in the state. The intent is to complete such a survey before the end of 2007.

## VII. Program Evaluation

**Evaluation Goal:** Evaluate the successes and failures of the NPS Management Program and identify the necessary updates to the NPS Pollution Management Program to maintain successful delivery of financial and technical assistance to local and state agencies and private organizations addressing NPS pollution.

The overall success or benefits of the NPS Program will be evaluated at both the state and local level. At the state level, success will be measured by the degree of progress toward goals set in the Management Plan. Locally, progress or success will be based on project-specific goals and objectives. At either level, short and long term measures will be used to document project or program accomplishments.

The long term goal of the NPS Program is to deliver a balanced program focused on the restoration and maintenance of beneficial uses impaired by NPS pollution. The 1998 305(b) Report and Section 303(d) list are the baseline documents that will be used to measure progress toward this goal. Development and implementation of watershed restoration projects in 75 of the "impaired" watersheds included on the 1998 303(d) list is the main objective being implemented to achieve the long term goal. This objective is scheduled to be met by 2013 through the completion of the objectives and tasks for each key element (Assessment, Prioritization, etc.) in the Management Plan.

With 26 watershed projects currently or previously supported under the 2003 and 2006 Grants and four new watershed projects requesting FY07 Section 319 funding, the program is

progressing toward the long-term objective of initiating 75 watershed restoration projects by 2013. Although some of the watershed project areas are not on the original 1998 303(d) list, they are all designed to address the sources and causes of beneficial use impairments identified through some type of watershed assessment. In many cases, the assessment data collected in the watersheds is also being used to develop TMDL's which, in turn, can be used to "fine-tune" the end-points for the watershed project implementation plans. By maintaining close coordination with the TMDL Program, most of the future NPS watershed assessment and implementation projects will be focused on 303(d) listed waterbodies. As a result, future watershed project areas should be more consistent with the scope of the program's long term objective for watershed restorations. A map of the implementation phase watershed projects that were active during the past reporting period and a list of the associated 12 digit HUC's is provided in Appendix B.

The local watershed projects are the most intensively monitored projects under the NPS Program. Although other types of projects, such as the educational projects, also measure progress toward established goals, the watershed projects are the only projects where water quality/quantity, biological and/or landuse data is collected on an regular basis. For example, during an average year, approximately 20 water quality samples are collected per STORET site within the active watershed project areas. The main parameters monitored typically include nitrogen, phosphorus, total suspended solids, and fecal coliform bacteria. Stream discharge and the biological community may also be monitored, when necessary. The specific data collected within any watershed is based on the beneficial use impairments and sources and causes of those impairments. Upon completion of a project, all the appropriate data is interpreted and a summary of the results is incorporated into the final project report in the GRTS. This same data may also be summarized in future 305(b) Reports to help evaluate long term NPS pollution trends in the state.

Despite the implementation of multiple BMP's and the collection of extensive water quality data, accurate documentation of annual pollutant reductions continues to be very difficult across the state. This is particularly true within the large watershed project areas. Due to natural and man induced variables, such as rainfall timing/amounts and cropping changes, it is apparent, many years of data will be needed to accurately document pollutant reductions within most watersheds. Consequently, annual and short term (3-5 years) progress within the watershed projects will be evaluated and quantified with computer models. In most cases, the STEPL model will be used to estimate annual pollutant load reductions associated with the acres of improved crop residue management and number of manure management systems. The Animal Feedlot Runoff Risk Index (AFRRI) worksheet and the AnnAGNPS model are two other models that may be used more in the future to estimate load reductions for nitrogen, phosphorus and sediment. The AFRRI worksheet will be used specifically for the evaluation of individual manure management systems, while AnnAGNPS will be used to estimate load reductions per watershed. The estimated annual pollutant load reductions for all the applicable watershed projects are entered in the GRTS in February of each year.

Since January 1, 2003, approximately thirty-nine percent (39%) of program expenditures have directly supported the implementation of BMPs. Figure 1 shows the total costs associated with BMP support as well as the total costs of the other NPS Program budget categories. The most common BMP's implemented with the Section 319 financial support have been no-till residue management; nutrient management; manure management systems and grazing management practices. The main NPS pollutants being addressed by these BMPs include nitrogen, phosphorus, sediment, and fecal coliform bacteria. Figure 2 lists the expenditures under each BMP Category and Appendix C provides a summary of the specific BMPs applied and supported since January 1, 2003.

**Figure 1.** Cumulative program expenditures from January 1, 2003 thru September 30, 2006.

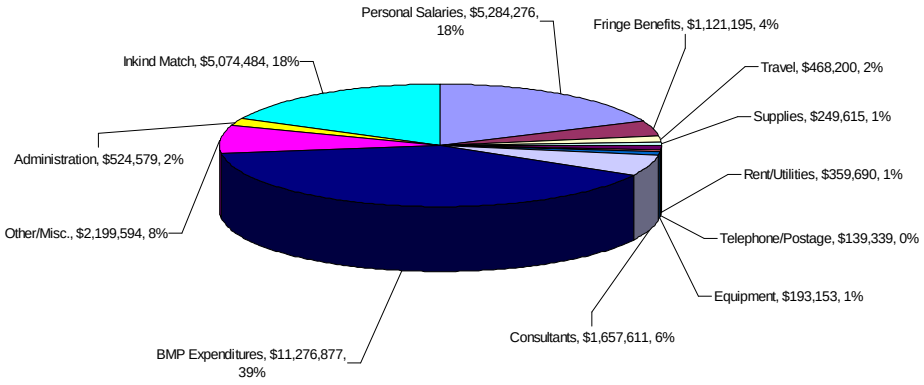
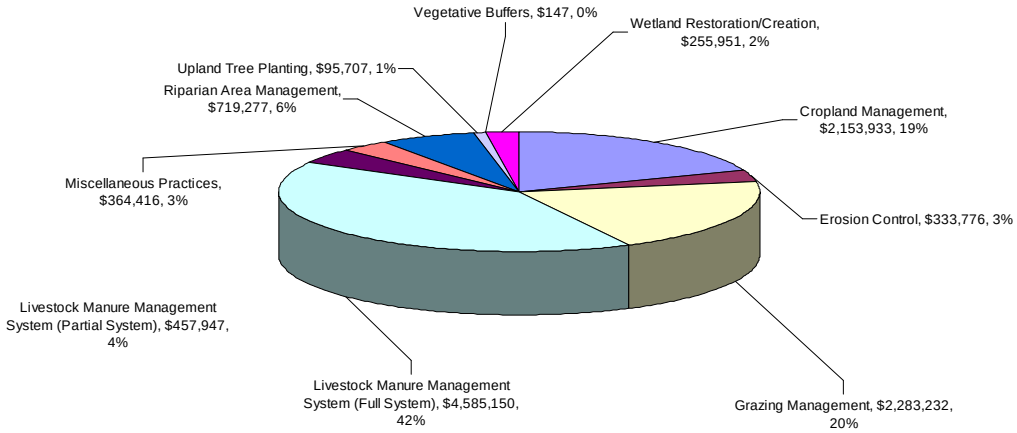



**Figure 2.** BMP Category expenditures under the 2003 and 2006 Grants - January 1, 2003 thru September 30, 2006.



As previously indicated, the NPS Program has been using the STEPL model to estimate load reductions for certain BMP's applied within the watershed projects. Although the watershed projects have and will continue to support the implementation of many different BMP, the STEPL model can only be used to estimate reductions associated with crop residue management practices and manure management systems. Due to these limitations, the benefits of BMP, such as prescribed grazing, riparian buffers, and nutrient management cannot be evaluated with the model. Consequently, many of the load reductions provided in GRTS may be under estimating pollutant loads, particularly if a project's focus is on livestock grazing or riparian management.

Over the past three years, the NPS Program has been directing increasingly more 319 funding toward BMP's designed to improve manure management. At the same time, the program and local projects have also reduced financial support for all the crop residue management practices (e.g., no-till, strip-till, etc.). These reductions are essentially related to the fact that crop residue management has improved significantly across the state and most residue management issues can generally be addressed through continued education and technical assistance rather than direct cost share assistance. As a result, given the limitations of the STEPL model, it is likely the STEPL model will eventually be phased out of the NPS Program evaluation process. Possible replacements for the STEPL model include the AFRRI worksheet and/or the AnnAGNPS.

NPS Program evaluation involves three specific objectives. These objectives and a summary of activities the past year are as follows:

**Objective 1:** Assess and document beneficial use impairments in the state's surface and ground water resources resulting from NPS pollution and, to the extent possible, identify current and future sources and causes of the use impairments or threats.

> (Discontinued) - For the purposes of statewide assessment and evaluation, the NPS Assessment Report has been replaced with the 305(b) Reports. Local NPS assessment reports or TMDL's are also used for watershed-specific evaluation and planning.

**Objective 2:** Maintain effective delivery of the NPS Program by conducting periodic reviews of Program accomplishments.

> (On Schedule) - Input on program delivery is provided by local project sponsors through direct feedback and their annual project reports. The local project's 2006 annual reports, including any feedback on the program, are in the GRTS.

**Objective 3:** Evaluate local NPS project progress toward goals identified in the PIP's.

> (On Schedule) - All data collected within the local project areas is compiled by the NDDH and entered in STORET. As the projects are completed, the applicable data is interpreted to evaluate progress toward quantified goals and objectives. This information is included in the final project reports which are entered in GRTS as they are completed.

# Appendix A
# Budgets & Status of Projects Supported Under the 2003 Consolidated Grant and 2006 Grant

# Projects Funded Under the 2003 Consolidated Section 319 Grant
## January 1, 2003 - September 30, 2006

### Development Phase - NPS Assessment

| Project Name | Status | 319 Allocation | Local Match | Total Budget | Start | End |
|---|---|---|---|---|---|---|
| Bear/Bonehill Creek Assessment | Completed | $15,253 | $10,169 | $25,422 | 1/1/2002 | 12/31/2003 |
| Cass Co. - Three Rivers Assessment Project | Active | $99,430 | $66,287 | $165,717 | 1/1/2004 | 6/30/2008 |
| Lake Hoskins Water Quality Assessment | Completed | $18,066 | $12,044 | $30,110 | 1/1/2003 | 9/30/2004 |
| McDowell Dam Alum Treatment Demo | Active | $54,678 | $36,452 | $91,130 | 4/1/2005 | 6/30/2007 |
| Ransom C. Sheyenne River Assessment | Completed | $79,480 | $52,987 | $132,467 | 1/1/2002 | 3/31/2005 |
| Red River Basin Volunteer Monitoring Network | Completed | $47,829 | $31,886 | $79,715 | 4/1/2004 | 5/31/2006 |
| Rice Lake Water Quality Improvement Project | Completed | $448,200 | $298,800 | $747,000 | 3/1/2005 | 8/20/2006 |
| Stutsman Co. Subwatershed Assessment Project | Active | $11,845 | $7,897 | $19,742 | 11/1/2005 | 6/30/2008 |
| Turtle River Assessment | Active | $87,079 | $58,053 | $145,132 | 9/1/2005 | 6/30/2008 |
| Unobligated Development Phase Fund | Active | $286,909 | $191,273 | $478,182 | 7/1/1999 | 6/30/2009 |
| Upper Goose River Watershed Assessment Project | Active | $71,616 | $47,744 | $119,360 | 10/1/2004 | 6/30/2007 |
| **Subtotal** | | $1,220,385 | $813,590 | $2,033,975 | | |

### Development Phase - TMDL Development

| Project Name | Status | 319 Allocation | Local Match | Total Budget | Start | End |
|---|---|---|---|---|---|---|
| Armourdale Dam TMDL | Completed | $4,055 | $2,703 | $6,758 | 10/1/2002 | 4/30/2004 |
| Blacktail & McGregor TMDL Development Projects | Completed | $14,998 | $9,999 | $24,997 | 5/1/2003 | 9/30/2004 |
| Carbury Dam TMDL | Completed | $6,184 | $4,123 | $10,307 | 10/1/2002 | 5/31/2003 |
| Dickinson Dike TMDL Development - Phase II | Completed | $2,873 | $1,915 | $4,788 | 4/1/2004 | 12/31/2005 |
| Dickinson Dike TMDL Develpoment - Phase I | Completed | $6,853 | $4,569 | $11,422 | 3/1/2003 | 6/30/2003 |
| McDowell Watershed TMDL | Completed | $22,688 | $15,125 | $37,813 | 7/1/2002 | 6/30/2004 |
| Northgate Dam TMDL | Completed | $14,245 | $9,497 | $23,742 | 10/1/2002 | 12/31/2005 |
| **Subtotal** | | $71,896 | $47,931 | $119,827 | | |

### Education - Demonstration

| Project Name | Status | 319 Allocation | Local Match | Total Budget | Start | End |
|---|---|---|---|---|---|---|
| Kelly Creek Water Quality Improvement Demonstration | Completed | $7,860 | $5,240 | $13,100 | 7/1/2000 | 9/1/2003 |
| SW North Dakota NPS/Water Quality I&E Project | Active | $910,886 | $607,257 | $1,518,143 | 3/1/1997 | 6/30/2009 |
| **Subtotal** | | $918,746 | $612,497 | $1,531,243 | | |

### Education - Public Outreach

| Project Name | Status | 319 Allocation | Local Match | Total Budget | Start | End |
|---|---|---|---|---|---|---|
| Digital Taxonomic Keys for Aquatic Insects in ND | Completed | $72,324 | $48,216 | $120,540 | 4/1/2001 | 6/30/2006 |
| Envirothon Program | Active | $142,948 | $95,299 | $238,247 | 4/1/2001 | 6/30/2008 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Foster County - TREES Program | Active | $390,118 | $260,079 | $650,197 | 7/1/1999 | 6/30/2007 |
| NDSU Livestock Waste Technical Information & Assistance Program | Active | $737,065 | $491,377 | $1,228,442 | 3/1/1997 | 6/30/2010 |
| Project WET | Active | $344,067 | $229,378 | $573,445 | 10/1/1993 | 6/30/2007 |
| Statewide ECO ED Camp | Active | $561,138 | $374,092 | $935,230 | 3/1/1997 | 6/30/2008 |
| **Subtotal** | | $2,247,660 | $1,498,440 | $3,746,100 | | |

## Local Project Support (TA or FA)

| Project Name | Status | 319 Allocation | Local Match | Total Budget | Start | End |
|---|---|---|---|---|---|---|
| Adams Co. Livestock Manure Management Program | Active | $1,009,584 | $673,056 | $1,682,640 | 5/1/2004 | 6/30/2009 |
| Dairy Pollution Prevention Program | Active | $1,413,558 | $942,372 | $2,355,930 | 4/1/2000 | 6/30/2009 |
| Groundwater Sensitivity Mapping | Completed | $329,704 | $219,803 | $549,507 | 4/1/2001 | 9/30/2005 |
| Livestock Facility Assistance Program | Active | $1,029,240 | $686,160 | $1,715,400 | 11/1/2001 | 6/30/2010 |
| ND Waterbank Program | Completed | $239,035 | $159,357 | $398,392 | 10/1/1999 | 6/30/2005 |
| NDSU Satellite Imagary for WQ Protection | Completed | $150,167 | $100,111 | $250,278 | 6/1/2000 | 6/30/2005 |
| NPS BMP Team | Active | $435,481 | $290,321 | $725,802 | 3/1/1997 | 6/30/2010 |
| Project Safe Send - Dept. of Agriculture | Completed | $140,895 | $93,930 | $234,825 | 5/1/2004 | 6/30/2005 |
| Stockmens Association Manure Management Specialist | Active | $1,386,326 | $924,217 | $2,310,543 | 12/1/2001 | 6/30/2010 |
| **Subtotal** | | $6,133,990 | $4,089,327 | $10,223,317 | | |

## NPS Assessment - Multi Year Grant Award

| Project Name | Status | 319 Allocation | Local Match | Total Budget | Start | End |
|---|---|---|---|---|---|---|
| Cannonball River Watershed Assessment - Phase II | Completed | $3,020 | $2,013 | $5,033 | 4/1/2001 | 6/30/2005 |
| Devils Lake Basin Assessment (00 WRAS) | Completed | $3,864 | $2,576 | $6,440 | 7/1/2000 | 6/30/2004 |
| NDSU Deep Soil Nitrogen Assessment | Completed | $15,960 | $10,640 | $26,600 | 4/1/1999 | 6/30/2005 |
| Nine Township Assessment (Knife River) | Completed | $31,286 | $20,857 | $52,143 | 7/1/2001 | 6/30/2004 |
| Pembina River Basin Assessment (99 WRAS) | Completed | $71,632 | $47,755 | $119,387 | 5/1/2000 | 6/30/2005 |
| Rocky Run Watershed Assessment - Phase I | Completed | $0 | $0 | $0 | 4/1/2000 | 6/30/2002 |
| UND Aquifer Denitrification Assessment | Completed | $39,388 | $26,259 | $65,647 | 10/1/1999 | 9/30/2005 |
| **Subtotal** | | $165,150 | $110,100 | $275,250 | | |

## NPS Program Staffing And Support

| Project Name | Status | 319 Allocation | Local Match | Total Budget | Start | End |
|---|---|---|---|---|---|---|
| NPS Program Staffing & Support | Active | $1,272,000 | $848,000 | $2,120,000 | 7/1/1999 | 2/28/2011 |
| **Subtotal** | | $1,272,000 | $848,000 | $2,120,000 | | |

## Watershed Project

| Project Name | Status | 319 Allocation | Local Match | Total Budget | Start | End |
|---|---|---|---|---|---|---|
| Barnes Co. Sheyenne River Watershed (01 WRAS) | Active | $1,453,114 | $968,743 | $2,421,857 | 4/1/2001 | 6/30/2010 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Bear Creek Watershed | Active | $877,402 | $584,935 | $1,462,337 | 5/1/2004 | 6/30/2009 |
| Beaver Creek Watershed (99 WRAS) | Active | $1,578,678 | $1,052,452 | $2,631,130 | 7/1/1997 | 6/30/2009 |
| Bone Hill Creek Watershed | Active | $633,660 | $422,440 | $1,056,100 | 4/1/2005 | 6/30/2010 |
| Buffalo Springs & Lightening Creek Watersheds | Active | $250,587 | $167,058 | $417,645 | 4/1/2001 | 6/30/2007 |
| Cedar Lake Watershed | Completed | $205,105 | $136,737 | $341,842 | 3/1/1999 | 6/30/2005 |
| Chanta Peta Watershed (00 WRAS) | Completed | $109,153 | $72,769 | $181,922 | 2/1/2001 | 6/30/2006 |
| Cottonwood Creek Watershed (99 & 02 WRAS) | Active | $615,708 | $410,472 | $1,026,180 | 3/1/1997 | 6/30/2007 |
| Crooked Creek Watershed (00 WRAS) | Active | $164,003 | $109,335 | $273,338 | 2/1/2001 | 6/30/2007 |
| Deep Creek Watershed | Active | $596,958 | $397,972 | $994,930 | 4/1/2005 | 6/30/2010 |
| Griggs Co. 319 Water Quality Project (99 WRAS) | Active | $709,534 | $473,023 | $1,182,557 | 7/1/1996 | 6/30/2007 |
| Hay Creek Watershed - Phase IV | Completed | $17,317 | $11,545 | $28,862 | 4/1/2001 | 5/31/2003 |
| Hay Creek Watershed - Phase V | Completed | $212,922 | $141,948 | $354,870 | 7/1/2002 | 2/29/2004 |
| Lake Hoskins Watershed | Active | $230,142 | $153,428 | $383,570 | 4/1/2005 | 6/30/2010 |
| Lower Pipestem Creek Watershed (02 WRAS) | Active | $2,047,192 | $1,364,795 | $3,411,987 | 4/1/2002 | 6/30/2008 |
| Maple Creek Watershed (00 WRAS) | Active | $781,709 | $521,139 | $1,302,848 | 10/1/2000 | 6/1/2008 |
| Middle Cedar Creek Watershed (00 WRAS) | Active | $422,659 | $281,773 | $704,432 | 2/1/2001 | 6/30/2007 |
| Mirror Lake Watershed | Completed | $71,856 | $47,904 | $119,760 | 3/1/1998 | 6/30/2004 |
| Nine Townships Watershed - Implementation Phase | Active | $760,888 | $507,259 | $1,268,147 | 5/1/2004 | 6/30/2009 |
| Pheasant Lake/Elm River Watershed (03 WRAS) | Active | $934,834 | $623,223 | $1,558,057 | 5/1/2003 | 6/30/2008 |
| Powers Lake Watershed (03 WRAS) | Active | $538,205 | $358,803 | $897,008 | 5/1/2003 | 6/30/2008 |
| Red River Riparian Project - Phases II & III (03 WRAS) | Active | $1,553,174 | $1,035,449 | $2,588,623 | 3/1/1998 | 6/30/2007 |
| Rocky Run Watershed - Phase II (02 WRAS) | Active | $689,066 | $459,377 | $1,148,443 | 7/1/2002 | 6/30/2007 |
| Sheyenne River & Dead Colt Watersheds (Ransom Co.) | Active | $635,919 | $423,946 | $1,059,865 | 4/1/2005 | 6/30/2010 |
| Upper Sheyenne Watershed (02 WRAS) | Completed | $39,647 | $26,431 | $66,078 | 7/1/1996 | 6/30/2004 |
| Wild Rice Watershed (99 & 00 WRAS) | Active | $1,420,061 | $946,707 | $2,366,768 | 10/1/1999 | 6/1/2009 |
| **Subtotal** | | $17,549,493 | $11,699,662 | $29,249,155 | | |
| **Grand Totals** | | **$29,579,320** | **$19,719,547** | **$49,298,867** | | |

# Projects Funded Under the 2006 Section 319 Grant
## April 1, 2006 - September 30, 2006

### Education - Demonstration

| Project Name | Status | 319 Allocation | Local Match | Total Budget | Start | End |
|---|---|---|---|---|---|---|
| SW North Dakota NPS/Water Quality I&E Project | Active | $426,200 | $284,133 | $710,333 | 3/1/1997 | 6/30/2009 |
| **Subtotal** | | $426,200 | $284,133 | $710,333 | | |

### Education - Public Outreach

| Project Name | Status | 319 Allocation | Local Match | Total Budget | Start | End |
|---|---|---|---|---|---|---|
| ND Groundwater Pesticide Assessment Educational Program | Active | $24,000 | $16,000 | $40,000 | 5/1/2006 | 6/30/2007 |
| NDSU Livestock Waste Technical Information & Assistance Program | Active | $367,451 | $244,967 | $612,418 | 3/1/1997 | 6/30/2010 |
| **Subtotal** | | $391,451 | $260,967 | $652,418 | | |

### Local Project Support (TA or FA)

| Project Name | Status | 319 Allocation | Local Match | Total Budget | Start | End |
|---|---|---|---|---|---|---|
| Dairy Pollution Prevention Program | Active | $1,063,800 | $709,200 | $1,773,000 | 4/1/2000 | 6/30/2009 |
| NPS BMP Team | Active | $830,000 | $553,333 | $1,383,333 | 3/1/1997 | 6/30/2010 |
| **Subtotal** | | $1,893,800 | $1,262,533 | $3,156,333 | | |

### NPS Program Staffing And Support

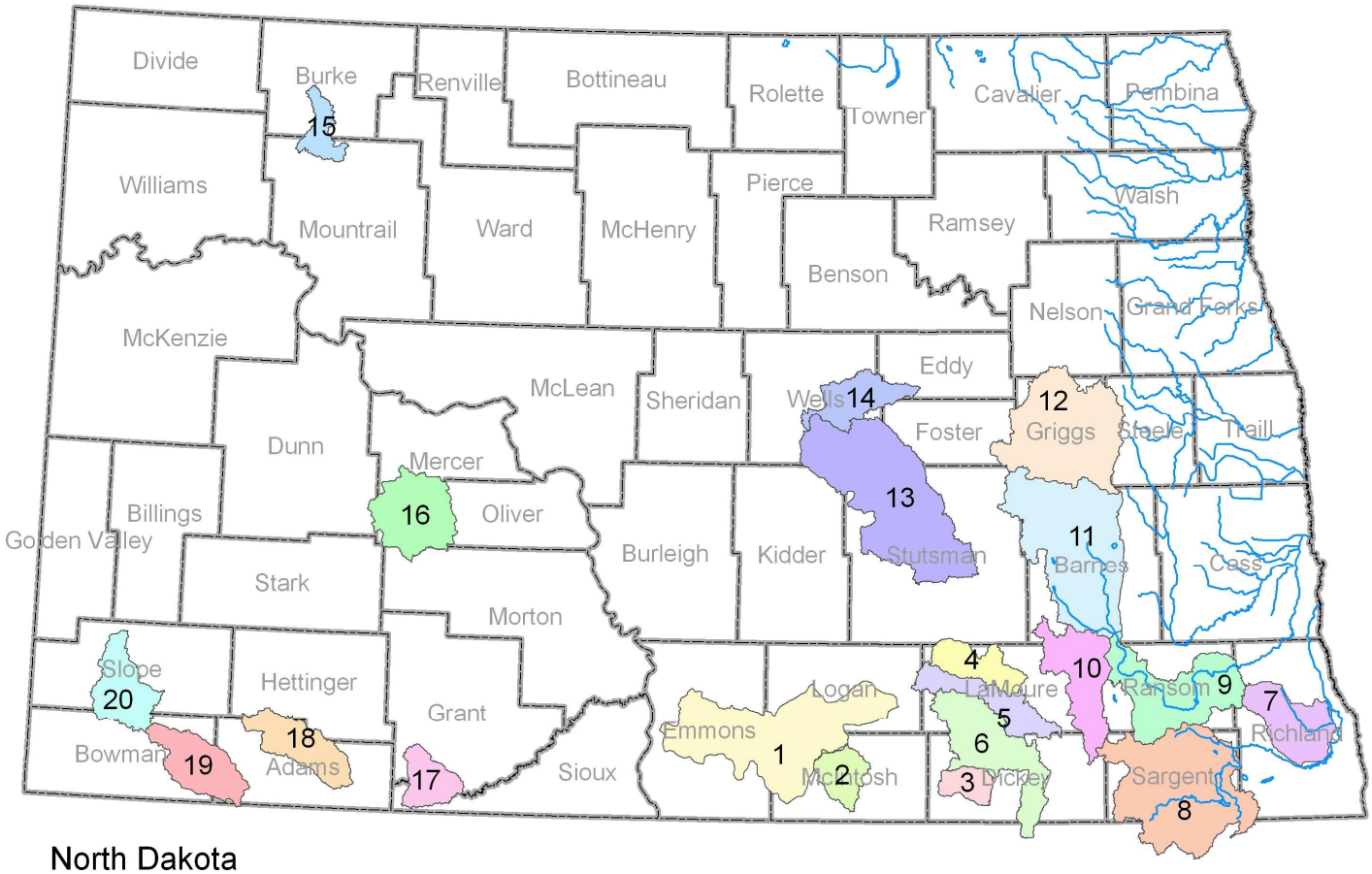
| Project Name | Status | 319 Allocation | Local Match | Total Budget | Start | End |
|---|---|---|---|---|---|---|
| NPS Program Staffing & Support | Active | $375,000 | $250,000 | $625,000 | 7/1/1999 | 2/28/2011 |
| **Subtotal** | | $375,000 | $250,000 | $625,000 | | |

### Watershed Project

| Project Name | Status | 319 Allocation | Local Match | Total Budget | Start | End |
|---|---|---|---|---|---|---|
| Antelope Creek Watershed & Wild Rice Riparian Corridor Project | Active | $880,949 | $587,299 | $1,468,248 | 5/1/2006 | 6/30/2010 |
| Beaver Creek Watershed (99 WRAS) | Active | $806,000 | $537,333 | $1,343,333 | 7/1/1997 | 6/30/2009 |
| **Subtotal** | | $1,686,949 | $1,124,633 | $2,811,582 | | |
| **Grand Totals** | | **$4,773,400** | **$3,182,267** | **$7,955,667** | | |

# Appendix B

## Map of Active Watershed Project Areas and Associated 12 Digit HUCs




# North Dakota Section 319 Watershed Projects

October, 2006

NORTH DAKOTA DEPARTMENT of HEALTH

County Boundary

**319 Projects**

1, Beaver Creek
10, Bear Creek
11, Barnes County Sheyenne River
12, Griggs County Sheyenne River
13, Lower Pipestem River
14, Rocky Run
15, Powers Lake
16, Nine Townships Watershed
17, Brushy Creek
18, Middle Cedar Creek
19, Buffalo Springs/Lightening Creek
2, Lake Hoskins
20, Deep Creek
3, Pheasant Lake
4, Bone Hill Creek
5, Cottonwood Creek
6, Maple Creek
7, Antelope Creek
8, Wild Rice
9, Ransom County Sheyenne River
Red River Riparian Project (Red River and its tributaries)

# 12 Digit HU Codes for each Section 319 Watershed Project - October 2006

**Buffalo Springs/Lightening Creek Watershed**

| 12 digit HUC | Acres | WQ-27 Priority |
|---|---|---|
| 101303010402 | 17,928 | N |
| 101303010403 | 17,919 | N |
| 101303010304 | 27,548 | N |
| 101303010404 | 18,155 | N |
| 101303010405 | 22,582 | N |
| 101303010406 | 13,733 | N |
| 101303010305 | 26,278 | N |
| 101303010407 | 11,644 | N |
| 101303010402 | 17,928 | N |
| 101303010401 | 22,319 | N |
| 101303010408 | 15,147 | N |
| Total Acres | 211,181 | |

**Middle Cedar Creek Watershed**

| 12 digit HUC | Acres | WQ-27 Priority |
|---|---|---|
| 101302050304 | 18,603 | N |
| 101302050401 | 20,250 | N |
| 101302050205 | 18,486 | N |
| 101302050404 | 15,441 | N |
| 101302050406 | 15,003 | N |
| 101302050403 | 13,300 | N |
| 101302050402 | 16,520 | N |
| 101302050405 | 15,748 | N |
| 101302050407 | 24,338 | N |
| 101302050408 | 24,858 | N |
| Total Acres | 182,547 | |

**Brushy Creek Watershed**

| 12 digit HUC | Acres | WQ-27 Priority |
|---|---|---|
| 101302050804 | 15,227 | N |
| 101302050802 | 22,191 | N |
| 101302050801 | 29,011 | N |
| 101302050803 | 19,056 | N |
| 101302050805 | 27,008 | N |
| Total Acres | 112,493 | |

**Rocky Run Creek Watershed**

| 12 digit HUC | Acres | WQ-27 Priority |
|---|---|---|
| 101600010305 | 31,137 | N |
| 101600010302 | 46,208 | N |
| 101600010304 | 29,644 | N |
| 101600010306 | 11,508 | N |
| 101600010303 | 21,180 | N |
| 101600010301 | 12,925 | N |
| Total Acres | 152,601 | |

**Bone Hill Creek Watershed**

| 12 digit HUC | Acres | WQ-27 Priority |
|---|---|---|
| 101600030702 | 30,710 | N |
| 101600030705 | 13,922 | N |
| 101600030704 | 23,322 | N |
| 101600030703 | 30,524 | N |
| 101600030706 | 29,127 | N |
| Total Acres | 127,606 | |

**Cottonwood Creek Watershed**

| 12 digit HUC | Acres | WQ-27 Priority |
|---|---|---|
| 101600030903 | 43,599 | N |
| 101600030904 | 18,646 | N |
| 101600030905 | 30,552 | N |
| 101600030906 | 13,254 | N |
| 101600030908 | 21,779 | N |
| 101600030907 | 32,179 | N |
| Total Acres | 160,010 | |

**Maple Creek Watershed (Dickey & LaMoure Co.)**

| 12 digit HUC | Acres | WQ-27 Priority |
|---|---|---|
| 101600040201 | 33,750 | N |
| 101600040202 | 20,109 | N |
| 101600040203 | 27,135 | N |
| 101600040204 | 35,663 | N |
| 101600040205 | 24,739 | N |
| 101600040301 | 19,198 | N |
| 101600040401 | 38,922 | N |
| 101600040302 | 14,859 | N |
| 101600040303 | 18,036 | N |
| 101600040304 | 11,951 | N |
| 101600040402 | 35,118 | N |
| 101600040403 | 31,056 | N |
| Total Acres | 310,537 | |

**Sheyenne River Watershed (Ransom Co.)**

| 12 digit HUC | Acres | WQ-27 Priority |
|---|---|---|
| 90202040505 | 27,954 | N |
| 90202040502 | 39,109 | N |
| 90202040503 | 12,888 | N |
| 90202040406 | 17,944 | N |
| 90202040404 | 30,327 | N |
| 90202040501 | 33,401 | N |
| 90202040405 | 39,012 | N |
| 90202040401 | 26,011 | N |
| 90202040402 | 31,561 | N |
| 90202040506 | 15,146 | N |
| 90202040504 | 51,699 | N |
| 90202040403 | 32,287 | N |
| Total Acres | 357,339 | |

**Lower Pipestem River Watershed**

| 12 digit HUC | Acres | WQ-27 Priority |
|---|---|---|
| 101600020104 | 19,902 | N |
| 101600020106 | 27,879 | N |
| 101600020105 | 31,915 | N |
| 101600020101 | 20,104 | N |
| 101600020102 | 10,331 | N |
| 101600020107 | 12,596 | N |
| 101600020103 | 40,196 | N |
| 101600020301 | 15,941 | N |
| 101600020205 | 21,471 | N |
| 101600020302 | 33,795 | N |
| 101600020204 | 15,346 | N |
| 101600020203 | 32,801 | N |
| 101600020202 | 29,604 | N |
| 101600020303 | 30,075 | N |
| 101600020201 | 26,092 | N |
| 101600020402 | 21,958 | N |
| 101600020401 | 33,312 | N |
| 101600020403 | 44,796 | N |
| 101600020501 | 22,995 | N |
| 101600020502 | 62,039 | N |
| 101600020504 | 31,606 | N |
| 101600020503 | 12,280 | N |
| 101600020506 | 21,676 | N |
| 101600020505 | 47,384 | N |
| 101600020507 | 18,613 | N |
| Total Acres | 684,709 | |

**Nine Townships Watershed (Mercer Co.)**

| 12 digit HUC | Acres | WQ-27 Priority |
|---|---|---|
| 101302010705 | 24,803 | N |
| 101302010606 | 20,604 | N |
| 101302010605 | 26,624 | N |
| 101302010704 | 22,725 | N |
| 101302010703 | 18,274 | N |
| 101302010601 | 26,086 | N |
| 101302010604 | 26,993 | N |
| 101302010702 | 23,493 | N |
| 101302010701 | 26,440 | N |
| 101302010603 | 19,372 | N |
| 101302010602 | 18,372 | N |
| Total Acres | 253,786 | |

**Powers Lake Watershed**

| 12 digit HUC | Acres | WQ-27 Priority |
|---|---|---|
| 101101011304 | 37,231 | N |
| 101101011303 | 23,700 | N |
| 101101011305 | 18,571 | N |
| Total Acres | 79,502 | |

**Pheasant Lake Watershed**

| 12 digit HUC | Acres | WQ-27 Priority |
|---|---|---|
| 101600040501 | 46,886 | N |
| 101600040502 | 23,934 | N |
| Total Acres | 70,819 | |

**Bear Creek Watershed**

| 12 digit HUC | Acres | WQ-27 Priority |
|---|---|---|
| 101600031101 | 25,742 | N |
| 101600031102 | 34,046 | N |
| 101600031103 | 26,346 | N |
| 101600031104 | 11,474 | N |
| 101600031001 | 36,492 | N |
| 101600031005 | 24,365 | N |
| 101600031002 | 21,557 | N |
| 101600031004 | 25,788 | N |
| 101600031003 | 41,600 | N |
| Total Acres | 247,409 | |

**Antelope Creek Watershed (Richland Co.)**

| 12 digit HUC | Acres | WQ-27 Priority |
|---|---|---|
| 90201050901 | 45,515 | N |
| 90201050902 | 26,133 | N |
| 90201050906 | 22,946 | N |
| 90201050907 | 21,787 | N |
| 90201050903 | 29,493 | N |
| 90201050905 | 40,479 | N |
| 90201050904 | 24,412 | N |
| Total Acres | 210,765 | |

**Deep Creek Watershed**

| 12 digit HUC | Acres | WQ-27 Priority |
|---|---|---|
| 101102030406 | 18,853 | N |
| 101102030409 | 20,942 | N |
| 101102030407 | 32,008 | N |
| 101102030408 | 13,673 | N |
| 101102030405 | 19,074 | N |
| 101102030404 | 23,821 | N |
| 101102030402 | 12,760 | N |
| 101102030401 | 25,132 | N |
| 101102030403 | 16,080 | N |
| 101102030403 | 16,080 | N |
| Total Acres | 198,423 | |

**Sheyenne River Watershed (Griggs Co.)**

| 12 digit HUC | Acres | WQ-27 Priority |
|---|---|---|
| 90202030404 | 26,125 | N |
| 90202030401 | 17,075 | N |
| 90202030502 | 24,898 | N |
| 90202030405 | 23,760 | N |
| 90202030803 | 17,580 | N |
| 90202030802 | 31,019 | N |
| 90202030805 | 30,439 | N |
| 90202030504 | 18,280 | N |
| 90202030503 | 10,860 | N |
| 90202030505 | 17,583 | N |
| 90202030507 | 34,378 | N |
| 90202030506 | 11,750 | N |
| 90202030804 | 21,189 | N |
| 90202030806 | 16,760 | N |
| 90202030901 | 17,568 | N |
| 90202030603 | 35,535 | N |
| 90202030807 | 34,181 | N |
| 90202030902 | 19,103 | N |
| 90202030602 | 12,182 | N |
| 90202030903 | 27,970 | N |
| 90202030703 | 24,474 | N |
| 90202030403 | 12,024 | N |
| 90202030402 | 18,734 | N |
| Total Acres | 503,469 | |

**Sheyenne River Watersehd (Barnes Co.)**

| 12 digit HUC | Acres | WQ-27 Priority |
|---|---|---|
| 90202030904 | 33,878 | N |
| 90202030808 | 33,327 | N |
| 90202040103 | 32,238 | N |
| 90202030905 | 34,945 | N |
| 90202040102 | 20,503 | N |
| 90202040104 | 36,995 | N |
| 90202040106 | 19,896 | N |
| 90202040101 | 26,922 | N |
| 90202040301 | 43,548 | N |
| 90202040105 | 50,756 | N |
| 90202040107 | 34,167 | N |
| 90202040201 | 11,230 | N |
| 90202040202 | 32,645 | N |
| 90202040302 | 22,010 | N |
| 90202040203 | 19,516 | N |
| 90202040205 | 27,101 | N |
| 90202040204 | 10,165 | N |
| 90202040303 | 34,132 | N |
| 90202030701 | 69,954 | N |
| 90202030702 | 18,277 | N |
| Total Acres | 612,205 | |

**Wild Rice River Watershed (Sargent Co.)**

| 12 digit HUC | Acres | WQ-27 Priority |
|---|---|---|
| 90201050603 | 29,599 | N |
| 90201050604 | 20,482 | N |
| 90201050103 | 39,986 | N |
| 90201050601 | 16,171 | N |
| 90201050602 | 26,399 | N |
| 90201050104 | 31,695 | N |
| 90201050403 | 26,244 | N |
| 90201050404 | 24,903 | N |
| 90201050506 | 14,191 | N |
| 90201050401 | 33,052 | N |
| 90201050402 | 16,870 | N |
| 90201050503 | 16,049 | N |
| 90201050308 | 23,440 | N |
| 90201050202 | 26,850 | N |
| 90201050105 | 38,029 | N |
| 90201050304 | 25,772 | N |
| 90201050502 | 37,760 | N |
| 90201050307 | 23,144 | N |
| 90201050303 | 39,045 | N |
| 90201050305 | 18,999 | N |
| 90201050306 | 30,003 | N |
| 90201050201 | 24,960 | N |
| 90201050302 | 8,139 | N |
| 90201050301 | 25,729 | N |
| Total Acres | 617,510 | |

**Beaver Creek Watershed (HUC 10130104)**

| 12 digit HUC | Acres | WQ-27 Priority |
|---|---|---|
| Not Completed | 626,007 | N |
| Total Acres | 626,007 | |

**Lake Hoskins Watershed**

| 12 digit HUC | Acres | WQ-27 Priority |
|---|---|---|
| Not Completed | NA | N |
| Total Acres | 25,000 | |

# Appendix C

## Amounts and Costs of Practices Implemented Under Each BMP Category

# Best Management Practices Implemented Under the 2003 Consolidated Grant

**January 1, 2003 - September 30, 2006**

| Category / Practice | Amount | Units | | Cost Share | Producer Match | Total Cost |
|---|---|---|---|---|---|---|
| ***Cropland Management*** | | | | | | |
| GPS Equipment (Nutrient Management) | 3.00 | Number | | $3,435.63 | $2,290.42 | $5,726.05 |
| Nutrient Management | 120,208.50 | Acres | | $319,773.00 | $213,181.66 | $532,954.66 |
| Pasture/Hayland Planting | 371.80 | Acres | | $6,882.92 | $4,588.61 | $11,471.53 |
| Pest Management | 36,503.20 | Acres | | $91,111.27 | $60,740.18 | $151,851.45 |
| Residue Management (Mulch Till) | 52,790.90 | Acres | | $235,309.19 | $156,872.49 | $392,181.68 |
| Residue Management (No-Till and Strip Till) | 92,673.90 | Acres | | $633,399.33 | $424,326.55 | $1,057,725.88 |
| Soil Test (Nutrient Management) | 36.00 | Number | | $1,213.32 | $808.88 | $2,022.20 |
| | | | **Total** | $1,291,124.66 | $862,808.79 | $2,153,933.45 |
| ***Erosion Control*** | | | | | | |
| Critical Area Planting | 678.30 | Acres | | $114,394.41 | $76,262.93 | $190,657.34 |
| Grade Stabilization | 1.00 | Number | | $1,616.89 | $1,077.92 | $2,694.81 |
| Grassed Waterway | 550.00 | Linear Feet | | $8,226.90 | $5,484.60 | $13,711.50 |
| Miscellaneous | 1.00 | Number | | $2,537.22 | $1,691.48 | $4,228.70 |
| Sediment Basin | 2.00 | Number | | $73,490.00 | $48,993.34 | $122,483.34 |
| | | | **Total** | $200,265.42 | $133,510.27 | $333,775.69 |

| Category | Practice | Amount | Units | Cost Share | Producer Match | Total Cost |
|---|---|---|---|---|---|---|
| ***Grazing Management*** | | | | | | |
| | Alternative Power Source (Livestock Watering Only) | 2.00 | Number | $5,625.68 | $3,750.45 | $9,376.13 |
| | Fencing | 1,009,367.60 | Linear Feet | $461,361.55 | $307,570.38 | $768,931.93 |
| | Mechanical Treatment | 45.00 | Acres | $224.10 | $149.40 | $373.50 |
| | Miscellaneous | 1.00 | System(s) | $2,280.24 | $1,520.16 | $3,800.40 |
| | Pasture/Hayland Planting | 7,680.00 | Acres | $153,312.92 | $102,209.29 | $255,522.21 |
| | Pipelines | 319,652.00 | Linear Feet | $417,039.10 | $278,026.40 | $695,065.50 |
| | Pond | 51.00 | Number | $51,566.80 | $34,377.87 | $85,944.67 |
| | Prescribed Grazing | 320.00 | Acres | $960.00 | $640.00 | $1,600.00 |
| | Range Planting | 41.90 | Acres | $1,286.60 | $973.12 | $2,259.72 |
| | Solar Pumps | 3.00 | Number | $9,670.20 | $6,446.80 | $16,117.00 |
| | Spring Development | 2.00 | Number | $14,010.19 | $9,340.12 | $23,350.31 |
| | Trough and Tank | 163.00 | Number | $120,166.98 | $80,109.98 | $200,276.96 |
| | Use Exclusion | 10.00 | Acres | $1,993.00 | $1,328.66 | $3,321.66 |
| | Well (Livestock Only) | 43.00 | Number | $130,444.50 | $86,847.62 | $217,292.12 |
| | | | **Total** | $1,369,941.86 | $913,290.25 | $2,283,232.11 |

| Category | Practice | Amount | Units | Cost Share | Producer Match | Total Cost |
|---|---|---|---|---|---|---|
| ***Livestock Manure Management System (Full System)*** | | | | | | |
| | Cultural Resource Review | 2.00 | Number | $611.56 | $407.70 | $1,019.26 |
| | Engineering Services - Post Construction | 1.00 | System(s) | $7,106.38 | $4,737.58 | $11,843.96 |
| | Engineering Services - Preconstruction | 4.00 | System(s) | $18,309.25 | $12,206.17 | $30,515.42 |
| | Manure Removal (Ag Waste) | 1.00 | System(s) | $816.00 | $544.00 | $1,360.00 |
| | Miscellaneous | 1.00 | System(s) | $1,899.80 | $1,266.53 | $3,166.33 |
| | Phase I Waste Management System | 30.00 | System(s) | $1,064,195.29 | $709,463.15 | $1,773,658.44 |
| | Phase II Waste Management System | 21.00 | System(s) | $565,679.36 | $377,119.59 | $942,798.95 |
| | Phase III Waste Management System | 3.00 | System(s) | $123,922.53 | $82,615.02 | $206,537.55 |
| | Soil Test (Ag Waste) | 1.00 | Number | $458.40 | $305.60 | $764.00 |
| | Waste Management System (Coordinated With EQIP) | 13.00 | System(s) | $482,672.27 | $321,781.53 | $804,453.80 |
| | Waste Management System (Full System Completed) | 12.00 | System(s) | $504,324.31 | $336,216.22 | $840,540.53 |
| | | | **Total** | $2,769,995.15 | $1,846,663.09 | $4,616,658.24 |

| Category | Practice | Amount | Units | Cost Share | Producer Match | Total Cost |
|---|---|---|---|---|---|---|
| ***Livestock Manure Management System (Partial System)*** | | | | | | |
| | Building Relocation, Moving Costs (Ag Waste) | 1.00 | Number | $24,160.36 | $16,106.91 | $40,267.27 |
| | Bunk Line Fencing (Ag Waste) | 1,920.00 | Linear Feet | $2,880.00 | $1,920.00 | $4,800.00 |
| | Diversion | 1,060.00 | Linear Feet | $8,559.50 | $5,706.34 | $14,265.84 |
| | Engineering Services - Construction Phase | 1.00 | System(s) | $6,715.20 | $4,476.80 | $11,192.00 |
| | Engineering Services - Preconstruction | 4.00 | System(s) | $6,375.57 | $4,250.40 | $10,625.97 |
| | Miscellaneous | 2.00 | Number | $2,233.36 | $1,488.90 | $3,722.26 |
| | Perimeter Fencing (Ag Waste) | 10,705.00 | Linear Feet | $11,663.28 | $7,775.52 | $19,438.80 |
| | Runoff Management System | 1.00 | System(s) | $57,353.63 | $38,235.75 | $95,589.38 |
| | Site Prep (Ag Waste) | 1.00 | System(s) | $2,175.00 | $1,450.00 | $3,625.00 |
| | Soil Test (Ag Waste) | 4.00 | Number | $2,148.36 | $1,432.24 | $3,580.60 |
| | Waste Storage Facility | 1.00 | System | $1,650.00 | $1,100.00 | $2,750.00 |
| | Waste Utilization | 9,112.62 | Acres | $117,814.40 | $78,717.46 | $196,531.86 |
| | Watering Facility (Ag Waste:Tank,Pipeline,Well) | 2.00 | System(s) | $7,600.56 | $5,067.04 | $12,667.60 |
| | Windbreak Fencing (Ag Waste) | 6,736.00 | Linear Feet | $4,429.06 | $2,952.70 | $7,381.76 |
| | | | **Total** | $255,758.28 | $170,680.06 | $426,438.34 |

| Category | Practice | Amount | Units | Cost Share | Producer Match | Total Cost |
|---|---|---|---|---|---|---|
| ***Miscellaneous Practices*** | | | | | | |
| | Cultural Resource Review | 6.00 | Number | $3,819.00 | $2,546.00 | $6,365.00 |
| | Engineering Services - Construction Phase | 3.00 | System(s) | $2,549.31 | $1,699.55 | $4,248.86 |
| | Engineering Services - Post Construction | 1.00 | System(s) | $1,824.00 | $1,216.00 | $3,040.00 |
| | Engineering Services - Preconstruction | 4.00 | System(s) | $11,164.01 | $7,442.67 | $18,606.68 |
| | Miscellaneous | 3,316.00 | Linear Feet | $14,586.09 | $9,724.06 | $24,310.15 |
| | Septic System Renovation | 1.00 | System(s) | $2,328.33 | $1,552.22 | $3,880.55 |
| | Site Preparation - Heavy w/Chemical (Trees, G13) | 2.00 | Acres | $204.00 | $136.00 | $340.00 |
| | Soil Investigations | 1.00 | Number | $443.22 | $295.48 | $738.70 |
| | Solar Pumps | 4.00 | Number | $6,849.66 | $4,566.44 | $11,416.10 |
| | Urban Stormwater Management | 1.00 | System | $160,880.98 | $107,253.97 | $268,134.95 |
| | Well Decommissioning | 24.00 | Number | $14,001.46 | $9,334.00 | $23,335.46 |
| | | | **Total** | $218,650.06 | $145,766.39 | $364,416.45 |

| Category | Practice | Amount | Units | | Cost Share | Producer Match | Total Cost |
|---|---|---|---|---|---|---|---|
| ***Riparian Area Management*** | | | | | | | |
| | Engineering Services - Construction Phase | 1.00 | System(s) | | $4,744.13 | $3,162.75 | $7,906.88 |
| | Engineering Services - Preconstruction | 3.00 | System | | $7,392.15 | $4,928.11 | $12,320.26 |
| | Riparian Forest Buffer | 96.32 | Acres | | $71,217.10 | $50,765.85 | $121,982.95 |
| | Riparian Herbaceous Cover | 18.00 | Acres | | $12,808.08 | $5,250.93 | $18,059.01 |
| | Stream Channel Stabilization | 42,205.00 | Linear Feet | | $125,875.98 | $83,917.33 | $209,793.31 |
| | Streambank and Shoreline Stabilization | 14,314.00 | Linear Feet | | $206,678.25 | $137,785.50 | $344,463.75 |
| | Timber Stand Improvement (Scarification) | 2.00 | Acres | | $1,510.65 | $1,007.10 | $2,517.75 |
| | Tree Handplants | 1,833.00 | Number | | $1,339.80 | $893.20 | $2,233.00 |
| | | | | **Total** | $431,566.14 | $287,710.77 | $719,276.91 |
| ***Upland Tree Planting*** | | | | | | | |
| | Cultural Resource Review | 1.00 | Number | | $917.56 | $611.71 | $1,529.27 |
| | Mechanical Treatment | 3.20 | Acres | | $38.40 | $25.60 | $64.00 |
| | Site Preparation - Heavy w/Chemical (Trees, G13) | 32.20 | Acres | | $540.96 | $360.64 | $901.60 |
| | Tree Handplants | 2,172.00 | Number | | $2,337.03 | $1,558.01 | $3,895.04 |
| | Tree/Shrub Establishment | 149,355.34 | Linear Feet | | $24,881.34 | $16,587.23 | $41,468.57 |
| | Weed Control For Tree Establishment (Chem or Mech) | 32.20 | Acres | | $369.00 | $246.00 | $615.00 |
| | Windbreak/Shelterbelt | 110,971.00 | Linear Feet | | $28,339.46 | $18,894.21 | $47,233.67 |
| | | | | **Total** | $57,423.75 | $38,283.40 | $95,707.15 |

| Category | Practice | Amount | Units | | Cost Share | Producer Match | Total Cost |
|---|---|---|---|---|---|---|---|
| ***Vegetative Buffers*** | | | | | | | |
| | Filter Strip | 1.50 | Acres | | | | |
| | | | | | $88.47 | $58.98 | $147.45 |
| | | | | **Total** | $88.47 | $58.98 | $147.45 |
| ***Wetland Restoration/Creation*** | | | | | | | |
| | Wetland Creation | 8.00 | Acres | | | | |
| | | | | | $19,437.82 | $12,958.54 | $32,396.36 |
| | Wetland Restoration | 855.60 | Acres | | | | |
| | | | | | $122,078.79 | $101,475.48 | $223,554.27 |
| | | | | **Total** | $141,516.61 | $114,434.02 | $255,950.63 |
| | | | | **Grand Total** | **$6,736,330.40** | **$4,513,206.02** | **$11,249,536.42** |